

**CLAIMS**

It is claimed:

- 5           1. A system for sequencing products, comprising:  
          a plurality of input feeding devices each randomly receiving  
          product from a stream of product;  
          a plurality of output groups each having a plurality of output bins;  
          and  
10           a control system having a mode which constrains the input feeding  
          devices to (i) feeding non-rejected product to output bins of assigned  
          output groups of the plurality of output groups associated with a  
          corresponding one of the plurality of input feeding devices, and (ii)  
          feeding rejected product to at least one output bin of the plurality of output  
15           bins in a single group accessible to any of the plurality of input feeders.
2. The system of claim 1, wherein each of the plurality of input  
          feeding devices directs the rejected product from the stream of product to  
          the at least one output bin in the single group based on at least one of  
          misreading or non-reading of a code associated with the rejected product  
20           and an operator or machine error.
3. The system of claim 1, wherein a number of the plurality of  
          input feeding devices equals a number of the plurality of output groups.
4. The system of claim 1, wherein the at least one output bin is a  
          single reject output bin.

5. The system of claim 4, wherein the single reject output bin increases a capacity of processing points for sequencing the product during a second pass phase in the plurality of output groups.

6. The system of claim 4, wherein the single reject output bin is provided in a separate output group from the plurality of output groups.

7. The system of claim 1, wherein the control system assigns each input feeding device to a respective one of the assigned output groups of the plurality of output groups for feeding the non-rejected product during a second pass phase.

8. The system of claim 7, wherein the control system constrains each input feeding device to the at least one output bin for feeding the rejected product during the second pass phase.

9. The system of claim 1, wherein the control system assigns each of the assigned output groups to a designated number of routes.

10. The system of claim 1, wherein the plurality of input feeding devices is at least two input feeding devices.

11. The system of claim 1, wherein the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices.

12. The system of claim 1, wherein the control system provides the plurality of input feeding devices access to all of the plurality of output groups during a first pass phase of sorting the products.

13. The system of claim 1, wherein the plurality of input feeding  
5 devices is equal to a number of the plurality of output groups.

14. The system of claim 1, wherein the product is mail pieces.

15. A method of sequencing product, comprising the steps of:  
10 providing a plurality of product from a stream of product to any of a plurality of input devices;

feeding, in a first pass phase, each product of the plurality of product to output bins based on a code associated with each product of the plurality of product;

15 assigning each input device of the plurality of input devices to a specific output group of the plurality of output groups for a second pass phase;

feeding, in the second pass phase, non-rejected product of the plurality of product to the output bins of the specific output group assigned  
20 to the each input device which is feeding the non-rejected product; and

feeding, in the second pass phase, rejected product of the plurality of product to an output bin common and accessible to any of the input devices.

16. The method of claim 15, wherein the rejected product is based  
25 on one of a misreading or non-reading of a code associated with the rejected product and an operator error.

17. The method of claim 15, wherein the rejected products are fed by each input device of the plurality of input devices to the commonly accessible output bin.

18. The method of claim 15, further comprising the step of  
5 determining whether the product is going through a first pass phase or a second pass phase and adjusting a control system between a first mode of operation and a second mode of operation, respectively.

19. The method of claim 15, wherein the commonly accessible  
10 output bin is one of the output bins of the specific output group and the any of the input devices are all of the input devices.

20. The method of claim 15, wherein the product is mail pieces.

21. A system for sequencing product, comprising:

15 means for providing a plurality of product from a stream of product;

means for feeding each product of the plurality of product to output bins based on a code in a first pass phase and second pass phase;

20 means for assigning each feeding means to a specific output group of the plurality of output groups for the second pass phase;

means for constraining, in the second pass phase, non-rejected product of the plurality of product to the output bins of the specific output group assigned to the each feeding means which is feeding the non-rejected product; and

25 means for permitting, in the second pass phase, rejected product of the plurality of product to an output bin common and accessible to any of

the feeding means.

22. The system of claim 21, wherein at least the means for constraining and the means for permitting is a control system operable in a first mode of operation and a second mode of operation.

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23. The system of claim 21, wherein the product is mail pieces.